JOINT SERVICES WIRING ACTION GROUP

Winter 2018 Edition **JSWAG Newsletter** *Vol. 10, Issue 1*

http://www.navair.navy.mil/jswag

Announcements

The Spring JSWAG/JAvFOWG Technical Interchange Meeting is scheduled for May 1-3, 2018 in Austin, TX. Please visit www.navair.navy.mil/jswag or email jswag@navy.mil for more information.

Resources

- The Wiring Awareness (806881), Fiber Optic Awareness (806707) and Joint Service Wiring Manual Maintenance Techniques (806994) DVDs can be ordered by calling 888-743-4662 or by submitting a ticket at http://www.dimoc.mil/customer/contact.html
- Heatless Splice ApplicationVideo- https://www.youtube.com/watch?v=Op1YMaz454E&feature=youtu.be
- MIL-HDBK-522A- Guidelines for Inspection of AircraftWiring Interconnect Systems http://quicksearch.dla.mil/qsDocDetails.aspx?ident_number=277535
- MIL-HDBK-525- ElectricalWiring Interconnect System (EWIS) Integrity- http://quicksearch.dla.mil/qsDocDetails.aspx?ident_number=279725
- Need help locating information on connectors, contacts or accessories? If so, email us at jswag@navy.mil.

Newsletter Contact

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EWIS Preventative Maintenance

Preventative maintenance is most commonly associated with applying corrosion preventative compounds (CPC) to a treated surface without evidence of corrosion. However, other types of "preventable maintenance" exist and involve actual discrepancies. The difference is they are not typically thought of or treated as a "discrepancy." Finding AND correcting these discrepancies before they degrade applicable and/or surrounding systems is the only way to prevent future damage.

A false landing gear up indication would restrict all flight operations for an aircraft and maintenance would be fully dedicated to isolate and correct the fault. However, a misaligned cable clamp causing the landing gear indicating wire harness to make contact with the edge of a strut mount would most certainly go unnoticed. The difference is the latter has not caused system failure…YET!

The key is attention to detail, training and becoming accustomed to identifying, documenting and correcting these issues before they create larger problems. Whether discovered during a zonal inspection, final inspection or walking on/around the aircraft; noticing these subtle defects can significantly reduce future workloads and drastically improve flight safety.

Preventative maintenance has to become a top priority for all maintenance departments. The maintenance culture must shift from reactive to proactive. As such, the JSWAG Newsletter will feature preventative maintenance items, noting potential risks and providing descriptions and pictures of correct installations. The NA 01-1A-505-1, 01-1A-505-4, MIL-HDBK-522 and JSWAG SharePoint all provide detailed maintenance and training resources focused on protecting EWIS system integrity.

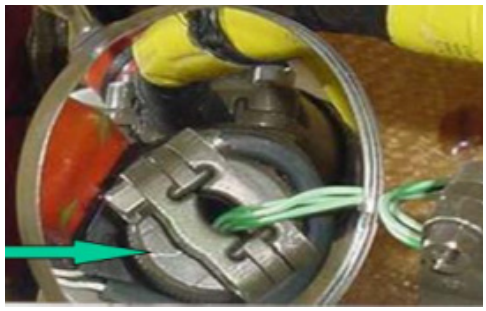
Wire Chafing

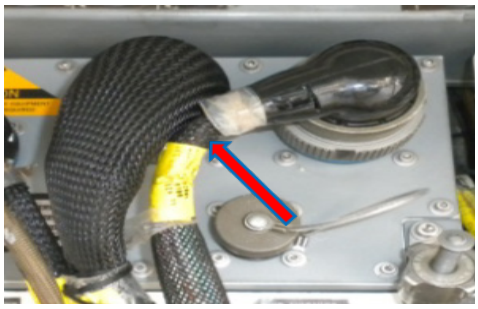
Wire chafing is one of the more prevalent discrepancies dramatically affecting EWIS integrity, reducing component lifecycles and risking safety. In many instances, a simple correction made early enough can prevent serious damage and injury. Common conditions that cause chafed wiring include: misrouted wiring, improperly installed cable clamps, inadequate

see Preventative Maintenance, page 2

Preventative Maintenance (cont)

secondary ties, improperly clocked connectors or lack of secondary protection. Regardless of the cause, chafing is an extremely dangerous condition that is preventable.



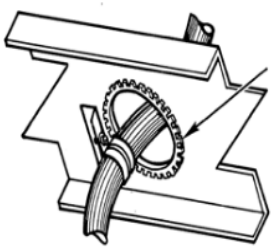


Potential Risks: Wire chafing breaks downs the insulation, exposing the conductor. Hazards associated with these conditions are: arcing, shorted wires, lost or degraded systems, injury or loss of life.

Preventative Maintenance: Preventative maintenance is dependent upon the actual cause of the chafing. Verify the correct routing of the particular wire harness as per aircraft specific maintenance manuals or engineering drawings. Ensure cable clamps are properly sized, in good condition, and properly positioned. Ensure secondary ties (spot ties) are installed with adequate tension and spacing. Re-clock (reposition) connector accessories to prevent contact with surrounding connectors, equipment, and/or structure. Install secondary protection to wire harnesses where they come in close proximity to surrounding equipment or structure.

While all chafing needs to be prevented, particular attention must be given to critical occurrences, such as chafing that involves flight critical systems, components with hazardous materials (e.g., fuel, hydraulic, or oxygen components), armament systems, and power systems.

Reference: NA 01-1A-505-1 WP 010 00, 020 00; MIL-HDBK-522



Find the Answer

Current Question- True/False:
Self-bonding silicone tape (i.e. pressure tape) CANNOT be used as secondary protection to prevent wire harness chafing.
Resource: NA 01-1A-505-1 WP 010 00, para 25 note, page 12
Answer will be provided in Spring 2018 Newsletter

Previous Question/Answer:
Which circuit breaker lockout / deactivation device is the only one approved for in-flight use?
Part Number 12E2081-9
Reference: NA 01-1A-505-1, WP 028 00, Para 67a(1), Page 11